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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant : T. KLOS et al.

Appl No : 09/853,722

Filed : May 14, 2001

For : METHOD AND SYSTEM FOR PROVISIONING DIGITAL SUBSCRIBER
LINE FACILITIES

Group Art Unit: 2665

Examiner: Toan Nguyen

REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents
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Sir:

In response to the Examiner's Answer, dated May 17, 2005, to the Appeal Brief filed

February 17, 2005, Appellants submit the present Reply Brief.

Appellants maintain that each reason set further in the Appeal Brief filed February

11, 2005, for the patentability of the pending claims is correct and again respectfully request

that the decision of the Examiner to reject claims 1-38 be reversed and that the application

be returned to the Examining Group for allowance.

REMARKS

The "Grounds of Rejection" at pages 3 - 20 (Section 10) of the Examiner's Answer repeats verbatim the Examiner's rejections set forth in the Final Office Action, issued July 20, 2004, in response to which Applicants have filed the subject appeal. Accordingly, it is respectfully submitted that Appellants' Appeal Brief, filed February 17, 2005, has fully addressed the Examiner's arguments regarding the requirements for patentability under 35 U.S.C. §§ 101, 102, 103 and 112, first and second paragraphs. The herein-contained remarks are therefore directed to the Examiner's "Response to Argument" at pages 20-27 (Section 11) of the Examiner's Answer, and are merely supplemental to the Appeal Brief filed on February 17, 2005.

(A) Claims 1-7, 18-19 and 22-23 are not obvious over SUNDARESAN et al. in view of RAWSON et al., and the decision to reject Claims 1-7, 18-19 and 22-23 under 35 U.S.C. §103(a) should be reversed.

The References Relied Upon by the Examiner Are Non-Analogous

The Examiner has not adequately refuted Appellants' assertion that references relied upon by the Examiner are non-analogous. In particular, as Appellants pointed out in the Appeal Brief, RAWSON et al. (U.S. Patent No. 6,028,867) do not address configuring or provisioning network facilities needed to provide a subscriber digital subscriber line (DSL) services, or to make changes to the service. RAWSON et al. assume that the desired service has already been established, and is routing calls and making connections through the network using that service. The routing of RAWSON et al. is not from the same field of endeavor as the provisioning of the presently claimed invention. In response, the Examiner

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essentially argues that the mere fact that RAWSON et al. refers to DSL services is sufficient to render it an analogous art. However, this reference is simply not reasonably pertinent to the particular problem with which the inventor is involved, i.e., the problem of efficiently provisioning service orders in various types and associated protocols of network facilities, which would otherwise need to be separately configured in order to implement the service orders. *See, e.g., In re Deminski,* 796 F.2d 436, 442, 230 USPQ 313, 315 (Fed. Cir. 1986); *In re Wood,* 599 F.2d 1032, 1036, 202 USPQ 171, 174 (CCPA 1979).

There Is No Motivation to Combine SUNDARESAN et al. with RAWSON et al.

As stated in Appellants' Appeal Brief, SUNDARESAN et al. (U.S. Patent No. 6,463,079) and RAWSON et al. address completely different aspects of broadband telecommunications services: SUNDARESAN et al. address implementing (i.e., *provisioning*) services, e.g., by pre-qualifying service requests and reserving resources, while RAWSON et al. address establishing connections (i.e., *routing*) across a network pursuant to an already provisioned service, and connecting to different types of destination end systems or "remote targets." In RAWSON et al., it is clear that the services that enable the users (110) to make connections across the telecommunications network (170) have already been set up, or configured. The data being sent across the network therefore is not provisioning data, but is the data the users (110) wish to convey to the remote targets (160) (*e.g.,* a company 160-A or an internet service provider 160-B).

In the "Response to Argument" section of the Examiner's Answer, the Examiner actually refers to the "high bandwidth data paths" of RAWSON et al., which are used to transport high speed data from the users (110) to the end system targets (160). This is *not* the data used to internally configure network elements to implement the service, and only

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underscores the fact that the subject matter of RAWSON et al. addresses a different problem than SUNDARESAN et al. Accordingly, there is no motivation in the provisioning disclosure of SUNDARESAN et al. to incorporate the routing interface of RAWSON et al.

The Combination of SUNDARESAN et al. in view of RAWSON et al.

Does Not Teach or Suggest All of the Limitations of the Rejected Claims

Claim 1

As argued in Appellants' Appeal Brief, the combination of SUNDARESAN et al. and RAWSON et al. at least does not teach or suggest determining an interface or configuring facilities using the interface in order to implement (i.e., provision) a DSL service. In this regard, the Examiner has conceded that SUNDARESAN et al. do not teach determining an interface corresponding to each of the plurality of assigned facilities, each interface converting at least a portion of provisioning data into a specific protocol corresponding to the assigned facility. The Examiner therefore relied on RAWSON et al., in combination with SUNDARESAN et al., to teach these claim elements. However, as previously argued by Appellants, RAWSON et al. disclose *routing* DSL calls from an end user (110) according to DSL services that have *already been provisioned*, and do not disclose implementing a DSL service order based on provisioning data. Accordingly, the RAWSON et al. patent only shows interfacing between end users (i.e., the subscriber/user 110 or the target 160) and a telecommunications network 170 to complete a call or connection, not interfacing between a network provisioning server (of the network provider and/or the service provider) and individual network facilities relied upon by the network to implement the DSL service.

In the "Response to Argument," the Examiner all but admits this distinction by stating that Rawson et al. teach the interface between the *user* (figure 1, reference 110) and the

telecommunications network (figure 1, reference 170). The Examiner mischaracterizes

reference 170 as the "provisioning server," as opposed to the telecommunications network

(*See* RAWSON et al., col. 6, line 55), but this does not change the fact that the RAWSON et

al. patent is not directed to provisioning, and thus does not (and cannot) teach the interface

features of the claimed embodiment of the present invention.

In addition to the portions of RAWSON et al. previously relied on, the Examiner cites

Fig. 5, reference 540, and col. 13, lines 33-35. Reference 540 is a flowchart step that states

"convert the received data unit to any desired format for delivery." Col. 13, lines 33-35 of

RAWSON et al. further describe 540 stating that "any necessary conversions (frames to

cells and vice versa) can be performed, for example, as described above." This quote

actually supports the exact point that Appellants made in their Appeal brief:

> In this environment, the "interfaces" disclosed by RAWSON et al. (as
> asserted by the Examiner) are DSL multiplexers 130-A and 130-B, located in
> the central office 120, and the "assigned facilities" are actually the
> destinations 160-A and 160-B. Also, "converting at least a portion of the
> *provisioning data* into a specific protocol corresponding to the assigned
> facility" *is actually converting DSL communication data to ATM, frame relay,*
> *or some other format compatible with the call destination, as opposed to*
> *converting provisioning data from a service order to protocols corresponding*
> *to, e.g., a remote terminal or an OCD, used to implement the DSL service*
> *order.*

Appeal Brief, p. 14 (emphasis added). Accordingly, the Examiner has pointed to no

additional portion of RAWSON et al. that supports his rejection.

Claim 18

Claim 18 recites a system database that stores a service order and a plurality of

interface identifiers for interfaces corresponding to the plurality of network facilities (e.g., RT

102, RT Controller 110, OCD 104, EMS 116). The Examiner has relied on RAWSON et al.

to teach a plurality of interface identifiers (Fig. 1, refs. 130-A, 130-B) that correspond to the

plurality of network facilities (Fig. 1, refs. 160-A, 160B). However, 130-A and 130-B are DSLAMS, or DSL modems, located within a central office in the telecommunication network 170, and 160-A and 160-B are "remote targets," which are remote end systems accessed by the users (110-A to 110-E) over the telecommunication network 170. *See* col. 6, lines 19-22. These remote targets are, for example, a company (160-A) accessed by employees (110-A, 110-B and 110-E) and an internet service provider (160-B) accessed by internet users (110-C and 110-D). *See* col. 7, lines 4-8.

The DSLAMs and remote targets of RAWSON et al. are *end users* and clearly do not teach or suggest the interface identifiers corresponding to *network facilities* that are provisioned by a server in response to a service order, as recited in claim 18. Tellingly, the Examiner must admit in the "Response to Argument" that a "provisioning server" is *"not shown* in Rawson et al." Examiner's Answer, p. 22 (emphasis added). The reason for this is simple: RAWSON et al. does not teach *provisioning* DSL services, only routing in accordance with previously provisioned services, so there is no need to show a provisioning server.

Furthermore, the Examiner has no good response to the fact that the remote targets 160-A and 160-B of RAWSON et al. are not network elements (such as RT 102, RT Controller 110, OCD 104, EMS 116), and are end systems/networks located outside the telecommunication network 170. *See, e.g.,* Fig. 1; col. 6, lines 58-60. The Examiner only implies that by being "connected" to the network, they are part of the network in a manner consistent with the claimed embodiment of the present invention, which is not accurate. Accordingly, the Examiner has not pointed to any additional portion of RAWSON et al. that supports his rejection of claim 18.

Claim 6

Claim 6 recites a profile identification that corresponds to parameters that define a DSL service. The profile identified for provisioning purposes may include information such as discrete multi-tone (DMT) parameters, e.g., data rates, noise levels and power characteristics, provided by a CLEC 106, to streamline provisioning of a service order. In other words, the service is provisioned based on the profile as opposed to user specific information. In comparison, Fig. 9 and col. 15, lines 55-65, of SUNDARESAN et al., which the Examiner continues to rely on, merely teach entering data specific to a user, such as user location. Accordingly, the Examiner has pointed to no additional portion of SUNDARESAN et al. or RAWSON et al. that supports his rejection.

Claims 7 and 23

SUNDARESAN et al. likewise do not teach or suggest displaying an error message at a graphical user interface (GUI) connected to the provisioning server, or correcting erroneous data through input from the GUI. The portions of SUNDARESAN et al. relied upon by the Examiner (i.e., Figs. 15 and 16; col. 23, lines 1-9; col. 23, line 26 – col. 24, line 55) merely disclose identifying an appropriate central office to associate with a particular user location, and the possibility of errors caused by relying on the user's phone number to make such a determination. Although a GUI is mentioned (e.g., Display Unit 570), there is no disclosure or suggestion of displaying an error message on the GUI, or receiving input via the GUI in response to the erroneous data.

Further, the specific quote cited by the Examiner in the "Response to Argument" addresses *pre-qualifying a user*, which may assist in avoiding erroneous data in the first place, but it does not teach or suggest displaying or correcting erroneous data at the GUI.

Accordingly, the Examiner has pointed to no additional portion of SUNDARESAN et al. that supports his rejection.

(B) Claims 8-17, 20-21 and 24-38 are not obvious over SUNDARESAN et al. in view of RAWSON et al. further in view of BYERS, and the decision to reject Claims 8-17, 20-21 and 24-38 under 35 U.S.C. §103(a) should be reversed.

The References Relied Upon by the Examiner Are Non-Analogous

In the "Response to Arguments," the Examiner only refers to his arguments in Section A, which Appellants have addressed above. The Examiner does not address the BYERS patent at all. As previously stated by Appellants in the Appeal Brief, BYERS only deals with the functionality of an outside distribution plant of a telecommunications network, consisting of optical links connecting switching systems of the network to remote terminals, to enable combined narrowband and broadband network connections. The problem addressed by BYERS is providing flexibility to prevent outside distribution plant resources from being over- or under-allocated. BYERS therefore is also a non-analogous reference.

There Is No Motivation to Combine SUNDARESAN et al. with RAWSON et al.

In the "Response to Arguments," the Examiner only refers to his arguments in Section A, which Appellants have addressed above.

The Combination of SUNDARESAN et al. in view of RAWSON et al. further in view of BYERS Does Not Teach or Suggest All of the Limitations of the Rejected claims

Claim 8

Claim 8 is generally distinguishable over the prior art as set forth with respect to claim 1 in Section A above, as well as in the original Appeal Brief. In addition, claim 8 recites

receiving a service order at a common server and converting the service order into provisionable steps. Therefore, in addition to the distinctions over claims 1 and 18, above, Appellants have further argued that SUNDARESAN et al. do not teach or suggest converting a service order into provisionable steps. In the "Response to Arguments," the Examiner relied on the same portion of SUNDARESAN et al. to support his rejection (i.e., col. 18, lines 1-24), which merely discloses prequalifying a service order. The Examiner further identifies Fig. 17 and Fig. 19 in the "Response to Arguments," but these figures and the supporting text are equally irrelevant as the previously cited portions. For example, Fig. 17 describes identifying and testing a local loop connection to accommodate a provisioning service. *See* col. 25, line 43 – col. 27, line 12. Although testing the local loop connection may be helpful, it is not the same as converting a service order into provisional steps. Likewise, although Fig. 19 shows a method for automatically provisioning of a permanent virtual circuit (PVC), it focuses primarily on identifying various network elements to implement the service, and does not specifically discuss converting a service order into provisionable steps. *See* col. 29, line 57 – col. 29, line 61. Accordingly, the Examiner has pointed to no additional portion of SUNDARESAN et al. that supports his rejection.

Claim 24

Claim 24 is generally distinguishable over the prior art as set forth with respect to claim 18 in Section A above, as well as in the original Appeal Brief. In addition, claim 24 recites a facility inventory systems that stores facility information regarding each of the plurality of network facilities (*e.g.*, Facility Inventory System 114), as noted by the Examiner in the "Response to Arguments." Appellants have submitted that, in addition to a number of other reasons that the prior art of record does not teach or suggest the features of claim 24,

SUNDARESAN et al. do not teach or suggest a facility inventory system. The Examiner originally asserted that the claimed facility inventory system is taught by the server system 1030 of Fig. 10, which stores only information *relating to the DSL subscriber* (*e.g.,* the user location, the desired services and the date from which the services are desired), not information relating to the facilities needed to implement the services. *See, e.g.,* col. 18, lines 1-12. In fact, the quote that the Examiner chose to include in his "Response to Arguments" actually supports Appellants' arguments to the contrary, in that the Examiner admits that the OSS 190 receives information "identifying the user location, desired services, and the date from which the services are desired." Col. 18, lines 1-3. There is no mention of an inventory of actual network facilities to be used. Accordingly, the Examiner has pointed to no additional portion of SUNDARESAN et al. that supports his rejection.

Claim 31

Claim 31 is directed to a computer readable medium for storing a computer program, executed by a provisioning server, that includes code segments for executing steps substantially similar to the method of claim 1, including converting the service order data into a protocol corresponding to an assigned facility. In the "Response to Arguments," the Examiner only refers back to his response to claim 1, which Appellants have address in Section A, above.

Claim 38

Claim 38 is directed to a computer readable medium for storing a computer program that includes code segments for executing steps substantially similar to the method of claim 8. In the "Response to Arguments," the Examiner only refers back to his response to claim 8, which Appellants have address in Section B, above.

Claims 17, 30 and 36

Appellants again submit that claims 17, 30 and 36 are allowable at least for the reason that these claims depend from claims 8, 24 and 31, respectively, shown to be allowable by Appellants. Further, claims 17, 30 and 36 recite a profile identification that corresponds to parameters that define the DSL service. In the "Response to Arguments," the Examiner only refers back to his response to claim 6, which Appellants have addressed in Section A, above.

Claims 11, 26, 37

Appellants again submit that claims 11, 26 and 37 are allowable at least for the reason that these claims depend from claims 8, 24 and 31, respectively, shown to be allowable by Appellants. Further, claims 11, 26 and 37 recite displaying an error message on a GUI, or receiving input via the GUI in response to the erroneous data. In the "Response to Arguments," the Examiner only refers back to his response to claims 7 and 23, which Appellants have addressed in Section A, above.

Claim 9

Claim 9 recites formatting data from the service order into a common internal format prior to converting the service order into provisionable steps. Commonly formatted data enables, for example, a single function to perform the service order data conversion, thus simplifying internal processing logic. In the "Response to Argument," the Examiner merely relies on the same portion of SUNDARESAN et al. that he originally cited to reject this claim (*i.e.,* col. 18, lines 49-53). The Examiner goes on to specifically quote, "[w]hen a requestor enters information related to a user location, XML-based software may be implemented, which transfers the data required to OSS 190 immediately upon entry (without the requestor
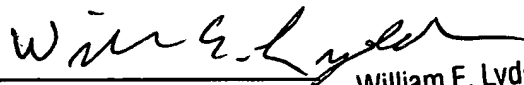
having to send the web page to any server)." However, SUNDARESAN et al. describes a user entering data to the OSS 190 via a client system 1010 and a server system 1030, that "is implemented as a web server which can be accessed on the world-wide-web ...." Col. 17, lines 54-59. In an embodiment, the server system 1030 is not needed when the client system 1060 itself has XML forms to fill out to implement order entry. Therefore, the quote on which the Examiner relies in the "Response to Argument" described data already being in a particular format compatible with the OSS 190, and is otherwise not relevant to converting data to a common format.

CONCLUSION

Accordingly, Appellants respectfully submit that each and every pending claim of the present application meets the requirements for patentability under 35 U.S.C. §101, 35 U.S.C. §102, 35 U.S.C. §103 and 35 U.S.C. §112, first and second paragraphs, and that the present application and each pending claim are allowable over the prior art of record.

Should there be any questions, any representative of the U.S. Patent and Trademark Office is invited to contact the undersigned at the below-listed telephone number.

Respectfully submitted,
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